

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): Spherical silica-titania-based fine particles surface-treated with silane, wherein a titanium atom content is within a range from 0.001 to 5% by weight, frictional electrification with iron powder is within a range from -100 to -300 $\mu\text{C/g}$, bulk density is within a range from 0.2 to 0.4 g/ml, and particle diameter is within a range from 0.01 to 5 μm .

Claim 2 (Original): A production process for the spherical silica-titania-based fine particles surface-treated with silane according to claim 1, comprising the steps of

(A) producing hydrophobic spherical silica-titania fine particles by introducing $\text{R}^5\text{SiO}_{3/2}$ units [wherein, R^5 represents a substituted or unsubstituted monovalent hydrocarbon group of 1 to 20 carbon atoms] onto a surface of hydrophilic spherical silica-titania fine particles comprising SiO_2 units and TiO_2 units, and

(B) introducing $\text{R}^7_3\text{SiO}_{1/2}$ units [wherein, said R^7 groups are either identical or different, and each represent a substituted or unsubstituted monovalent hydrocarbon group of 1 to 6 carbon atoms] onto a surface of said hydrophobic spherical silica-titania fine particles.

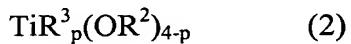
Claim 3 (Original): The production process according to claim 2, wherein said hydrophilic spherical silica-titania fine particles used in said step (A) are produced by a process that comprises a step for hydrolyzing and condensing a mixture of:

a tetrafunctional silane compound represented by a general formula (1):

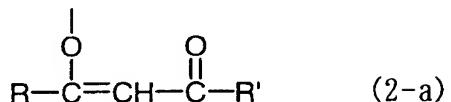


[wherein, said R¹ groups are either identical or different, and each represent a monovalent hydrocarbon group of 1 to 6 carbon atoms], or a partial hydrolysis-condensation product thereof, or a mixture of the two; and

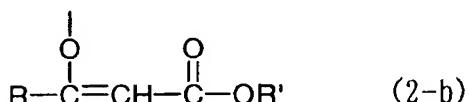
a tetrafunctional titanium compound represented by a general formula (2):



[wherein, said R² groups are either identical or different, and each represent a monovalent hydrocarbon group of 1 to 20 carbon atoms, R³ is either an enol residue of a β-diketone represented by a general formula (2-a):



(wherein, R and R' are either identical or different, and each represent a monovalent hydrocarbon group of 1 to 6 carbon atoms), or an enol residue of a β-ketoester represented by a general formula (2-b):



(wherein, R and R' are either identical or different, and are each as defined above), and p is an integer of 0 to 2] in a mixed liquid of water and a hydrophilic organic solvent in the presence of a basic material, thereby generating said hydrophilic spherical silica-titania fine particles.

Claim 4 (Original): The production process according to claim 3, wherein said tetrafunctional silane compound represented by the general formula (1) is selected from the

group consisting of tetramethoxysilane, tetraethoxysilane, tetraisopropoxysilane, tetrabutoxysilane, and tetraphenoxy silane.

Claim 5 (Currently Amended): The production process according to claim 3, wherein said tetrafunctional silane titanium compound represented by the general formula (2) is selected from the group consisting of titanium tetraisopropoxide, titanium tetrabutoxide, titanium tetrakis(2-ethylhexyloxide), titanium tetranonyloxide, titanium tetrastearoyloxide, titanium tetraisopropenoxide, titanium diisopropoxide bis(2,4-pentanedionate), titanium dibutoxide bis(2,4-pentanedionate), titanium diisopropoxide bis(2,2,6,6-tetramethyl-3,5-heptanedionate), and titanium diisopropoxide bis(ethylacetoacetate).

Claim 6 (Original): The production process according to claim 3, wherein said hydrophilic organic solvent is an alcohol solvent represented by a general formula (3):



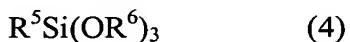
[wherein, R^4 is a monovalent hydrocarbon group of 1 to 6 carbon atoms].

Claim 7 (Currently Amended): The production process according to ~~any one of claims 3 to 6~~ claim 3, wherein said basic material is ammonia.

Claim 8 (Currently Amended): The production process according to ~~any one of claims 3 to 6~~ claim 3, wherein the quantity of water used is within a range from 0.5 to 5 mols per 1 mol of alkoxy groups within the tetrafunctional silane compound of the general formula (1) or the partial hydrolysis-condensation product thereof and the tetrafunctional titanium compound of the general formula (2), and the ratio between the water and the hydrophilic organic solvent is a weight ratio within a range from 0.5 to 10.

Claim 9 (Currently Amended): The production process according to ~~any one of claims 3 to 6~~ claim 3, wherein the quantity of the basic material is within a range from 0.01 to 5 mols per 1 mol of alkoxy groups within the silane compound of the general formula (1) or the partial hydrolysis-condensation product thereof and the compound of the general formula (2).

Claim 10 (Currently Amended): The production process according to ~~any one of claims 2 through 9~~ claim 2, wherein in said step (A), a trifunctional silane compound represented by a general formula (4):



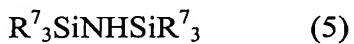
[wherein R^5 is a substituted or unsubstituted monovalent hydrocarbon group of 1 to 20 carbon atoms, and said R^6 groups are either identical or different, and each represent a monovalent hydrocarbon group of 1 to 6 carbon atoms], or a partial hydrolysis-condensation product thereof, or a mixture of the two is added to either an aqueous dispersion, or a mixed solvent dispersion of water and a hydrophilic organic solvent in the presence of said hydrophilic spherical silica-titania fine particles, thereby treating a surface of said hydrophilic spherical silica-titania fine particles and generating hydrophobic spherical silica-titania fine particles.

Claim 11 (Original): The production process according to claim 10, wherein the trifunctional silane compound represented by the general formula (4) is selected from the group consisting of methyltrimethoxysilane, methyltriethoxysilane, ethyltrimethoxysilane, ethyltriethoxysilane, n-propyltrimethoxysilane, n-propyltriethoxysilane, isopropyltrimethoxysilane, isopropyltriethoxysilane, butyltrimethoxysilane, butyltriethoxysilane, hexyltrimethoxysilane, trifluoropropyltrimethoxysilane and

heptadecafluorodecyltrimethoxysilane, and a partial hydrolysis-condensation product of these compounds.

Claim 12 (Currently Amended): The production process according to claim 10, wherein the quantity of the trifunctional silane compound represented by the general formula (4) is within a range from 0.001 to 1 mol per 1 mol of combined SiO₂ units and TiO₂ units within the hydrophilic spherical silica-titania fine particles.

Claim 13 (Original): The production process according to claim 10, wherein in said step (B), a dispersion medium of said aqueous dispersion comprising hydrophobic spherical silica-titania fine particles is replaced with a ketone-based solvent, thereby generating a ketone-based solvent dispersion comprising said hydrophobic spherical silica-titania fine particles, and either a silazane compound represented by a general formula (5):



[wherein, said R⁷ groups are either identical or different, and each represent a substituted or unsubstituted monovalent hydrocarbon group of 1 to 6 carbon atoms], a monofunctional silane compound represented by a general formula (6):



[wherein, said R⁷ groups are either identical or different and are as defined above, and X represents either an OH group or a hydrolysable group], or a mixture of the two is added to said ketone-based solvent dispersion comprising said hydrophobic spherical silica-titania fine particles, thereby triorganosilylating residual reactive groups at a surface of said hydrophobic spherical silica-titania fine particles.

Claim 14 (Original): The production process according to claim 13, wherein the quantity of the ketone-based solvent, reported as a weight ratio relative to the quantity of hydrophilic spherical silica-titania fine particles used, is within a range from 0.5 to 5.

Claim 15 (Original): The production process according to claim 13, wherein said ketone-based solvent is methyl isobutyl ketone.

Claim 16 (Currently Amended): The production process according to claim 13, wherein the silazane compound represented by the general formula (5) is present and is hexamethyldisilazane or hexaethylsilazane.

Claim 17 (Currently Amended): The production process according to claim 13, wherein the monofunctional silane compound represented by the general formula (6) is present and is selected from the group consisting of trimethylsilanol, triethylsilanol, trimethylchlorosilane, triethylchlorosilane, trimethylmethoxysilane, trimethylethoxysilane, trimethylsilyldimethylamine, trimethylsilyldiethylamine, and trimethylacetoxysilane.

Claim 18 (Original): The production process according to claim 13, wherein the quantity of the silazane compound, the monofunctional silane compound, or a mixture of the two is within a range from 0.1 to 0.5 mols per 1 mol of combined SiO₂ units and TiO₂ units within the hydrophilic spherical silica-titania fine particles.

Claim 19 (Original): An external additive for an electrostatically charged image developing toner comprising the spherical silica-titania-based fine particles surface-treated with silane according to claim 1.

Claim 20 (Currently Amended): ~~The external additive for an~~ An electrostatically charged image developing toner comprising the external additive according to claim 19, wherein the quantity of the external additive added to the toner is within a range from 0.01 to 30 parts by weight per 100 parts by weight of the toner.

DISCUSSION OF THE AMENDMENT

All multiple dependent claims have been amended to depend on a single claim. In addition, Claim 5 has been amended by correcting “silane” to --titanium--. Claim 12 has been amended by inserting a period at its end. Claims 16 and 17 have each been amended by further reciting that the recited compound is present. Finally, Claim 20 has been amended to clarify that a toner, not the external additive, is being claimed.

No new matter is believed to have been added by the above amendment. Claims 1-20 remain pending in the application.